NOTES AND SYNONYMY OF HYMENOPTERA IN THE COLLECTION OF THE TRANSVAAL MUSEUM.

By Dr. H. Brauns.

The following paper deals with some types of the late Peter Cameron, collected mainly by Mr. Janse and described in the Annals of the Transvaal Museum. Only a part of the species described is at present in the Transvaal Museum. Descriptions by the same author on South African Hymenoptera are to be found in the Transactions of the Philosophical Society of South Africa (now Royal Society), the Annals of the South African Museum, and in the Records of the Albany Museum, Grahamstown. The large quantity of Hymenoptera from all parts of the world acquired by the late P. Cameron is now the property of the British Museum and contains some 2000 type specimens. The descriptions of these types are scattered over the whole world in various publications. Unluckily the majority of all these types are not valid, having been based on already known and described species. The late Geoffrey Meade Waldo, R. E. Turner, and Claude Morley have already studied a part of the type material deposited in the British Museum. The results of their study is to be found in the Annals and Magazine of Natural History, Ser. 8, Vols. XIV and XVI. I have myself published notes on synonymy of Cameron's types in the Deutsche Ent. Zeitschrift and in the Revue Zool. Africaine. The synonymy could not be established in all the species before me. It will be necessary to study such material again when monographs of difficult genera are available, which is at present not the case. Up to that time such types have to be considered as valid. The material before me is in a very bad state of preservation. The types of the very small *Braconidae*, *Ichnenmonidae*, and *Chalcididae* cannot be recognized any more and should be discarded. They will be a ballast only in the literature. I have indicated such species with an asterisk.

1. *Plesia transvaalensis* Cam. ♂ Type. Annals of the Transvaal Museum, Nov., 1910, p. 119.

   This is not a *Plesia*, but a ♂ of *Myzine*. Cameron could not distinguish between the ♂♂ of *Plesia* and *Myzine* and committed many errors in his descriptions as pointed out by Turner in his paper, "Notes on the Scoliidae"—Trans. Ent. Soc., London, Dec. 21, 1910, p. 392.

2. *Plesia pacificatrix* Cam. ♂ Type. *Ibidem*, p. 118.
   As the preceding species, this is not a *Plesia* but *Myzine* ♂.

3. *Discolia pallidipilosella* Cam. ♂ Type. *Ibidem*, p. 120.
   This specimen is the ♂ of *Discolia Wahlbergi* Sauss., and therefore synonymous with this species.

4. *Dielis transvaalensis* Cam. ♂ Type. *Ibidem*, p. 121.
   This specimen is *Elis barbata* Sauss. ♀ and synonymous to the latter.

5. *Myzine immaculatus* Cam. (sic!). ♀ Type. *Ibidem*, p. 117.
   Should be *immaculata!*

6. *Myzine erythrostomus* Cam. (sic!). ♀ Type. *Ibidem*, p. 117.
   Should be *erythrostoma!* and is synonymous to *Myzine rufifrons*. F. *Vide* Turner "Species of Fossorial Hymenoptera," in Trans. Ent. Soc., London, 1912, pt. 4, p. 733.

7. *Tiphia transvaalensis* Cam. ♀ Type. *Ibidem*, p. 116.

8. *Cerceris armaticeps* Cam. ♀ Type. *Ibidem*, p. 149.
   Cerceris Jansei Cam. ♂ Type. *Ibidem*, 149 p. ff.
   Cameron, p. 150, marks his type "male," while the type specimen before me is a "female." The description of Cameron points to a ♀. He compares, p. 150, his *C. Jansei* with *C. melanospila* Cam. I have already, *loc. aliis*, stated that *C. melanospila* is synonymous to *C. diodonta* Schletterer, so is *C. Jansei* Cam. The specimen represents the form of *diodonta* Schlett. as it occurs in the north of South Africa. The synonymy must therefore be read thus:—

   Cerceris diodonta Schlett.
   C. melanospila Cam.
   C. Jansei Cam.

9. *Cerceris heterospila* Cam. ♀ Type. *Ibidem*, 150, p. 151.
   There are three specimens, two of each labelled as "Type of *heterospila*." The third specimen is labelled as "Type of *heterospila* Cam. var." Two of them have the locality-label "Doornfontein," one only the number "4125." All three specimens are ♂♂, while Cameron marks his type of *heterospila* as a ♀. Two of the specimens, viz., the one No. 4125 and the one labelled "*heterospila* var.," agree well with the description though the sex is wrong. The third does not belong to the described species, but is a small ♂ of *Cerceris ventrilobata* m.i.l., as I have it in my collection. It is at present not quite certain whether this m.i.l. name will be stable or prove to be synonymous with a previously described species. The two ♂♂ above mentioned must therefore at present be considered as the type and type var. or the species described as *heterospila* Cam. and "female" has to be altered into "male" in Cameron's description.

10. *Cerceris spinicaudata* Cam. ♀ Type.
    Cameron: "On Some New Genera and Species of Hymenoptera from Cape Colony and Transvaal"—Trans. S.A. Phil. Soc., 1905, Vol. XV, pt. 4, p. 216.
    This specimen is not collected by Janse and therefore not described with the other material in the Transvaal Museum Annals.
    Bearing the locality-label "Pearston" (Cape Colony) it is apparently a specimen collected by Dr. Broom at Pearston. Cameron described, *loc. cit.*, some Hymenoptera collected by Prof. Dr. Broom at Pearston. The specimen before me is apparently the type of the description as cited above. Cameron omits in his

description the yellow markings of the abdomen entirely. However, the type of *spinicaudata* Cam. before me agrees altogether with the type of *C. Whiteana* Cam. described in the same paper, p. 225. I have compared this type with my own material of this species. The two species are therefore identical and should have the same name, *spinicaudata* Cam., because this name precedes, in the paper, the name of *Whiteana* Cam.

11. *Palarus curvilineatus* Cam. ♂ Type.

Trans. S.A. Phil. Soc., 1905, p. 212.

This type is also no part of the Janse Collection, but the type to the description as cited. The name has no value, as this specimen is a ♂ of *Palarus latifrons* ~~Rose~~ Kohl, described by me in the Annals of the K. K. Hofmuseum, Wien. Further, see Turner: Annals and Magazine of Natural History, Ser. 8, Vol. XVI, Oct., 1915, p. 336.

12. *Stizus Johannis* Cam. ♀ Type.

Records Albany Museum, 1905, Vol. I, No. 5, p. 323.

This specimen is also no part of the Janse Collection, but collected at Dunbrody (Cape Province) by Rev. Father O'Neil.

It is synonymous to the previously described *Stizus oxydorcus* Handl., which has precedence. The type of *St. oxydorcus* Handl. is in my collection.

13. *Stizus erythraspis* Cam. ♀ Type.

Annals Transvaal Museum, *loc. cit.*, p. 144.

This type is the ♀ of the somewhat variable *Stizus Dewitzi* Handl., which name has precedence.

14. *Ampulex Jansei* Cam. ♀ Type. *Ibidem*, p. 140.

This type falls into the synonymy of *A. nigrocoerulea* Sauss, 1892, a species widely distributed in the Orange Free State and Transvaal.

Saussure's name has precedence.

Further, see Turner: Annals and Magazine of Natural History, Ser. 8, Vol. XVI, Oct., 1915, p. 336.

15. *Dolichurus denticollis* Cam. ♀ Type. *Ibidem*, p. 141.

Is not a *Dolichurus*, but *Ampulex* (Rhinopsis), and must therefore be named *Ampulex denticollis* (Cam.).

The type specimen before me is a *male*, not a *female* as marked by Cameron.

This synonymy has been pointed out already by Turner; see Annals and Magazine of Natural History, Ser. 8, Vol. XVI, Oct., 1915, p. 335.

16. *Philanthus trichiocephalus* Cam. ♂ Type. *Ibidem*, p. 147.

This ♂ specimen belongs to *Philanthus histrio* F., a species widely distributed in Africa.

17. *Philanthus spilaspis* Cam. ♀ Type. *Ibidem*, pp. 145 and 146.

The specimen is a ♂, not a ♀ as indicated in Cameron's description.

18. *Philanthus transversus* Cam. ♂ Type. *Ibidem*, pp. 147 and 148.
This specimen is a ♂ and dwarf specimen of the old *Ph. triangulum* F., var. *diadema* F., a form common through the whole of Africa.

19. *Bembex testaceicauda* Cam. ♀ Type. *Ibidem*, pp. 144 and 145.
This specimen is the ♀ of *B. Mobii* Handl. and synonymous to the latter.
The sex is not indicated in the description.

20. *Liris nigropilosellus* Cam. ♂ Type. *Ibidem*, p. 132.
Is the ♂ of *Tachytes natalensis* Sauss. and synonymous to the latter. See Turner: Annals and Magazine of Natural History, Ser. 8, Vol. XVI, Oct., 1910, p. 336.

21. *Ammophila maculifrons* Cam. ♂ Type. *Ibidem*, pp. 134–135.
Again the type is a ♀, not a ♂. It is the ♀ of the long established *Ammophila tenuis* Palisot.

22. *Ammophila coeruleoornata* Cam. ♂ Type. *Ibidem*, p. 135.
The specimen is the male of *Ammophila tenuis* Palisot, both *maculifrons* and *coeruleoornata* Cam., fall therefore under the synonymy of *A. ternuis* Pal.

23. *Ammophila pulchricollis* Cam. ♂ Type. *Ibidem*, p. 133.
Again this type specimen is a ♀ and not a ♂ as noted in Cameron's diagnosis.

24. *Ammophila dolicho ephala* Cam. ♂ Type. *Ibidem*, pp. 135–136.
There are two specimens of this species, each having a type label of *A. dolichocephala* Cam.

25. *Ammophila lineatocollis* Cam. Type M.S. ?
This type is not a part of the Janse Collection described in the Annals of the Transvaal Museum.
Whether Nos. 23, 24, and 25 are valid species can only be decided after the South African species of *Ammophila* have been studied and monographed, which is not yet the case.

26 *Tachytes argenteovestita* Cam. ♀ Type. *Ibidem*, p. 130.

27. *Corytes transvaalensis* Cam. ♀ Type. *Ibidem*, p. 143.

28. *Crabro erythrotoma* Cam. ♀ Type.
Records of the Albany Museum, Vol. I, No. 4, p. 259.
This species, which belongs to the genus *Dasyproctus*, is no part of the Janse Collection. As it has the habitat-label "Dunbrody (Cape)" it is a specimen collected by Rev. Father O'Neil. The *Crabro* species of the northern hemisphere are replaced by the genus *Dasyproctus* in the south.

29. *Trypoxylon lissonotum* Cam. ♀ Type.
Annals of the Transvaal Museum, Vol. II, 1910, p. 152.

30. *Pison transvaalensis* Cam. ♂ var. Type. *Ibidem*, p. 152 ff.
This is apparently the specimen designated p. 153.

31. *Pison clypeatus* Cam. ♀ Type. *Ibidem*, pp. 153–154.

32. *Passaloecus striatifrons* Cam. ♀ Type. *Ibidem*, p. 151 ff.
The specimen has no locality-label.

33. *Heliocyrtes 4-dentatus* Cam. ♀ Type. *Ibidem*, p. 142 ff.

34. *Astata albopilosella* Cam. ♂ Type. *Ibidem*, p. 130.

35. *Sphex Jansei* Cam. ♂ Type. *Ibidem*, p. 139.
The species belongs to the Isodontia group.

36. *Notogonia rufoseapa* Cam. ♀ Type.
Records of the Albany Museum, Vol. I, No. 5, 1905, p. 321.
This specimen, collected by O'Neil at Dunbrody (Cape), is no part of the Janse collection. I know another specimen in the Albany Museum with Cameron's type-label.

37. *Notogonia brevicarinata* Cam. ♀ Type.
Annals of the Transvaal Museum, Vol. II, 1910, No. 3, p. 131.

38. *Notogonia transvaalensis* Cam. ♀ Type. *Ibidem*, p. 131.

39. *Notogonia pretoriaensis* Cam. ♀ Type. *Ibidem*, p. 132.

40. *Anoplius mimeticus* Cam. ♂ Type.
Records of the Albany Museum, Vol. I, No. 4, p. 263.

41. *Anoplius hirtiscapus* Cam. ♂ Type.
Records of the Albany Museum, Vol. I, No. 3, p. 132.
Both specimens, *A. mimeticus* and *A. hirtiscapus*, are collected by O'Neil at Dunbrody (Cape), having his locality-labels. The two specimens belong to two different genera, *hirtiscapus* being a ♂ of a *Clavelia* species as now designated by *Sustera*.

42. *Homonotus spilonotus* Cam. ♂ Type.
Records of the Albany Museum, Vol. I, No. 3, p. 134.
This specimen is no part of the Janse Collection. It is collected by O'Neil at Dunbrody (Cape). It is a ♀, not a ♂ as designated in the description. The specimen is identical with *H. Wasmanni* Brauns., of which the type is in my collection. The latter has precedence ; my specimens come from the same locality as Cameron's type of *spilonotus*.

43. *Homonotus spoliatus* Cam. Type.
Annals of the Transvaal Museum, Vol. II, No. 3, 1910, p. 127.

44. *Pseudagenia viridipennis* Cam. ♀ Type.
Records of the Albany Museum, Vol. I, No. 3, p. 137.
This specimen is no part of the Janse Collection, being collected by O'Neil at Dunbrody (Cape). Cameron misplaced this species in the genus *Pseudagenia*. It is a species of ~~*Porrapompilus*~~. Parapompilus.

45. *Pompilus Jansei* Cam. ♀ Type.
Annals of the Transvaal Museum, Vol. II, Nov., 1910, p. 124.
There are two ♀♀ of this species, both labelled " type." The species is again misplaced and belongs to *Parapompilus* as the preceding species.

46. *Jansea longitarsis* Cam. ♂ Type. *Ibidem*, p. 129.
The specimen is a ♀, not a ♂ as designated in Cameron's description. Cameron created a new genus for the reception of this species, being unaware that Kohl had named the genus before him as *Eidopompilus*. The latter generic name has therefore priority.

47. *Agenia varipalpis* Cam. ♀ Type. *Ibidem*, p. 127.
The species belongs to the genus *Pseudagenia* Kohl. In the description, p. 128, 2nd line, "*tibiae*" is to be placed for "*calcaria*."

48. *Agenia ornaticollis* Cam. ♀ Type. *Ibidem*, p. 128.
The species belongs to the genus *Pseudagenia* Kohl.

49. *Aporus leucotrichius* Cam. ♂ Type. *Ibidem*, p. 128 ff.
In the description, p. 129, 8th line, "*tibiae*" is to be read for "*calcaria*."

50. *Pompilus longihirtus* Cam. ♀ Type. *Ibidem*, p. 125.
Two specimens are in the collection, both having a type-label.

51. *Pompilus leptacanthus* Cam. ♀ Type. *Ibidem*, p. 126.

52. *Pompilus desidiosus* Cam. ♀ Type. *Ibidem*, p. 124.

53. *Pompilus commodus* Cam. ♂ Type. *Ibidem*, p. 125.
The specimen is a ♀, not as designated a ♂.

54. *Pompilus acutiangulatus* Cam. ♀ Type. *Ibidem*, pp. 125–126.

55. *Salius irenensis* Cam. ♂ Type. *Ibidem*, p. 122.
Two specimens are in the collection, both having a type-label. The species must be placed in the genus *Cyphononyx* Dhlb.

56. *Salius lineaticollis* Cam. ♀ Type. *Ibidem*, p. 121.
Two specimens are in the collection, both having a type-label. The species must be placed in the genus *Mygnimia* Shuck. The badly damaged specimen of the two belongs to *Mygnimia Tamasieri* Guér. The description points to this specimen not agreeing with the other one. *S. lineaticollis* is therefore *Mygnimia Tamasieri* Guér.

57. *Salius hilaris* Sm. ♂ Type. *Ibidem*, p. 122.
The identification is doubtful.

58. *Rhynchohalcis niger* Cam. ♀ Type.
Trans. S.A. Phil. Soc., Vol. XV, pt. 4, p. 209, 1905.
This type is no part of the Janse Collection. It bears the locality "Stellenbosch," and is therefore most probably the type to the quoted description.

59. *Mesoagathis fuscipennis* Cam. ♂ Type.
Records of the Albany Museum, Vol. I, No. 3, p. 172.
This is no part of the Janse Collection, but the type to the description quoted above. It bears the locality-label "Grahamstown Col.," Miss Daly and Miss Sole.

60. *Xenolobus rufus* Cam. ♂ Type.
Annals of the Transvaal Museum, Vol. II, 1911, No. 4, p. 199.

61. *Rhogas erythrostomus* Cam. ♀ and ♂ Types. *Ibidem*, p. 196.
Two specimens have " type " labels, the third not.

62. *Rhogas melanospilus* Cam. ♂ Type. *Ibidem*, p. 197.

63. *Rhogas plurilineatus* Cam. ♂ Type. *Ibidem*, p. 197.
Two specimens, each with a " type " label. " *Pleurilineatus* " is an error in print. The labels have the name " *pleurilineatus* " which is as well in the synoptical table, p. 196.

64. *Rhogas varicarinatus* Cam. ♂ Type. *Ibidem*, p. 198.

65. *Rhogas varinervis* Cam. ♂ Type. *Ibidem*, p. 198.
Two specimens with a " type " label each are in the collection.

66. *Rhogas pallidipalpis* Cam. ♂ Type. *Ibidem*, p. 198.

67. *Rhogas striatifrons* Cam. ♂ Type. *Ibidem*, p. 199.
There are two specimens, each bearing a " type " label.

68. *Rhogas transvaalensis* Cam. ♂ Type. *Ibidem*, p. 199.

69. *Macrocentrus luteus* Cam. ♂ Type. *Ibidem*, p. 210.

*70. *Macrocentrus pallidistigma* Cam. ♂ Type. *Ibidem*, p. 210.
The specimen is without abdomen and unrecognizable !

71. *Macrocentrus latisulcatus* Cam. ♀ and ♂ Types. *Ibidem*, p. 210 ff.
Only the ♂ type is present in the collection.

72. *Macrocentrus nigro-ornatus* Cam. ♀ Type. *Ibidem*, p. 211.

*73. *Macrocentrus annulicornis* Cam. ♀ Type. *Ibidem*, p. 211.
Not recognizable !

74. *Apanteles eurygaster* Cam. ♂ Type. *Ibidem*, p. 207.

*75. *Apanteles africanus* Cam. ♂ Type. *Ibidem*, p. 207.
Not recognizable !

76. *Apanteles fuscinervis* Cam. ♂ Type. *Ibidem*, p. 207.

77. *Apanteles transvaalensis* Cam. ♀ Type. *Ibidem*, p. 208.

78. *Apanteles testaceolineatus* Cam. ♀ Type. *Ibidem*.

79. *Apanteles testacioventris* Cam. ♂ Type. *Ibidem*, p. 208.
Misprinted ! should read " *testaciventris*," as it is on the type label and in the synoptical label.

80. *Phanerotoma curvimaculata* Cam. ♀ Type. *Ibidem*, p. 203.

81. *Phanerotoma pallidipes* Cam. ♂ and ♀ Types. *Ibidem*, pp. 203 and 204.

82. *Cyclocormus luteus* Cam. ♀ Type. *Ibidem*, p. 209.

*83. *Hormius testaceus* Cam. ♀ Type. *Ibidem*, p. 195.
Not recognizable !

84. *Iphiaulax pretoriaensis* Cam. Type. *Ibidem*, p. 192.
It is a ♀. The description makes no mention of the sex.

85. Eurytoma *transvaalensis* Cam. ♀ Type. *Ibidem*, p. 215.
Three specimens with a type-label each. One of these belongs to the *Braconide* genus *Apanteles*.

86. *Eurytoma palliditarsis* Cam. ♀ Type. *Ibidem*, p. 216.

*87. *Enkoebelea testaceipes* Cam. ♀ Type. *Ibidem*, pp. 216–217.
Totally destroyed.

There are a few more types of Cameron in the box, of which I cannot find the descriptions. They follow here and perhaps some are only MS. names.

* *Eurytoma testaciitarse* Cam. Type. Cape Colony. Not Janse Collection.

* *Eurytoma striatula* Cam. Type. Cape Colony. Not Janse Collection.

* *Euplectrus xanthostomus* Cam. Type. Two specimens of Janse Collection, each with type-label.

Pteromalus transvaalensis Cam. Type. Janse Collection.
Two specimens with type-label each.

* *Norna crassinerva* Cam. Type. Janse Collection.

* *Eucharis fuscicornis* Cam. Type. Janse Collection.

* *Curitapus fulvipes* Cam. Type. Janse Collection.

Charitopus fulvipes Cam. Type. Janse Collection.

* *Ceraphron erythrogaster* Cam. Type. Janse Collection.